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Established in 1938

June 1, 2015

NOTICE OF PREPARATION / NOTICE OF INTENT OF A DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT AND NOTICE OF PUBLIC SCOPING MEETING

Bid Log 2012-12
W26636, W30193, R11112
CSLC EIR/EIS No. 767
State Clearinghouse No.: 2015061001

NOTICE IS HEREBY GIVEN that the California State Lands Commission (CSLC), as Lead Agency under the California Environmental Quality Act (CEQA), and Monterey Bay National Marine Sanctuary (MBNMS), as Lead Agency under the National Environmental Policy Act (NEPA), will prepare a joint Environmental Impact Report/ Environmental Impact Statement (EIR/EIS), and that CSLC and MBNMS staffs will hold a joint public scoping meeting for the project listed below.

Project Title: **MONTEREY BAY REGIONAL WATER PROJECT**

Applicant: DeepWater Desal, LLC

Project Description and Location: A proposed 25,000 acre-feet per year seawater reverse osmosis (SWRO) desalination facility and co-located seawater-cooled 150-megawatt computer data center campus located approximately 1.5 miles east of Moss Landing, Monterey County, and associated seawater intake and brine discharge pipelines that would extend west from Moss Landing Harbor to the upper reaches of the submarine Monterey Canyon and the north shelf, respectively, within Monterey Bay National Marine Sanctuary (Attachments 1-3).

Meeting Information: **Tuesday, June 16, 2015**; sessions begin at **2 PM** and **6 PM**
Moss Landing Marine Laboratories, Main Building Conference Room
8272 Moss Landing Road
Moss Landing, CA 95039

Please see attachments for further details.

Signature: Cynthia Herzog

Cynthia Herzog, Senior Environmental Scientist

June 1, 2015
Date

NOTICE OF PREPARATION/NOTICE OF INTENT OF A DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT AND NOTICE OF PUBLIC SCOPING MEETING

Date: June 1, 2015

To: Responsible, Trustee and Cooperating Agencies and Interested Parties

From: CALIFORNIA STATE LANDS COMMISSION

MONTEREY BAY NATIONAL MARINE SANCTUARY
National Oceanic and Atmospheric Administration

Project: Monterey Bay Regional Water Project

Applicant: DeepWater Desal, LLC

Project Location: A proposed 25,000 acre-feet per year (AFY) seawater reverse osmosis (SWRO) desalination facility and co-located seawater-cooled 150-megawatt computer data center campus located on a 110-acre site approximately 1.5 miles east of Moss Landing in Monterey County, California. The Project would also include seawater intake and brine discharge pipelines that would extend west from Moss Landing Harbor to the upper reaches of the submarine Monterey Canyon and the north shelf, respectively, within Monterey Bay National Marine Sanctuary (MBNMS) (Attachments 1-4).

Meeting Information: Tuesday, June 16, 2015; sessions begin at 2 PM and 6 PM
Moss Landing Marine Laboratories (MLML), Main Building Conference Room
8272 Moss Landing Road
Moss Landing, CA 95039

Directions: From the Monterey Peninsula, take Highway 1 North. Turn left onto Moss Landing Road (1.7 miles after Castroville). MLML main lab building is located at 8272 Moss Landing Road on the left directly after the cemetery.

From the Santa Cruz area, take Highway 1 South. Turn right onto Moss Landing Road (0.2 miles past the Duke Energy Power Plant). Continue straight through town past the antique stores and post office. MLML main lab building is located at 8272 Moss Landing Road on the right just before the cemetery.

State Clearinghouse No.: 2015061001

This Notice is also available online at www.slc.ca.gov and on the Federal docket at www.Regulations.gov.

1. CEQA/NEPA PROCESS

This Notice of Preparation/Notice of Intent (NOP/NOI) and Notice of Public Scoping Meetings are published in accordance with: the California Environmental Quality Act (CEQA); California Public Resources Code section 21080.4, subdivision (a); State CEQA Guidelines section 15082; section 102(2)(C) of the National Environmental Policy Act (NEPA) of 1969, as amended; and the White House Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (CEQ NEPA Regulations).[1]

The California State Lands Commission (CSLC) and the MBNMS, as CEQA and NEPA lead agencies respectively, will prepare a joint Environmental Impact Report/ Environmental Impact Statement (EIR/EIS) to identify and assess potential environmental impacts associated with the proposed DeepWater Desal, LLC (DWD or Applicant) Monterey Bay Regional Water Project (Project). Publication of this notice initiates the public scoping process to solicit public and agency comment, in writing or at the public meeting, regarding the full spectrum of environmental issues and concerns relating to the scope and content of the EIR/EIS, including:

- analyses of the human and marine resources that could be affected;
- the nature and extent of the potential significant impacts on those resources;
- a reasonable range of alternatives to the proposed Project; and
- mitigation measures.

Applicable agencies will need to use the EIR/EIS when considering related permits or other approvals for the Project.

Written comments must be received or postmarked by **July 3, 2015**. Please send your comments at the earliest possible date as provided below:

Comments to CEQA Lead Agency:	**Comments to NEPA Lead Agency:**
Email comments, including attachments, to CEQAcomments@slc.ca.gov (preferred option)* or send them via mail or fax** to: Cynthia Herzog Senior Environmental Scientist California State Lands Commission 100 Howe Avenue, Suite 100-South Sacramento, CA 95825 FAX: (916) 574-1885 Phone: (916) 574-1890	Submit comments to the Federal docket at www.Regulations.gov: **Docket ID:** NOAA-NOS-2015-xxx **Agency:** National Oceanic and Atmospheric Administration **Parent Agency:** Department of Commerce

** Please write "Monterey Bay Regional Water Project NOP/NOI Comments" in the email subject line.*
*** If faxed, please also mail a copy to ensure that a readable copy is received by this office.*

[1] CEQA is in California Public Resources Code section 21000 et seq. and the State CEQA Guidelines are in California Code of Regulations, Title 14, section 15000 et seq. NEPA is in 42 United States Code (U.S.C.) section 4321 et seq., and the CEQ NEPA Regulations are at 40 Code of Federal Regulations (CFR) section 1500 et seq.

1.1 Important Notes to Commenters

Before including your mailing or email address, telephone number, or other personal identifying information in your comment, please be aware that the entire comment—including personal identifying information—may become publicly available, including in the EIR/EIS and posted on the Internet. The CSLC and MBNMS will make available for inspection, in their entirety, all comments submitted by organizations, businesses, or individuals identifying themselves as representatives of organizations or businesses.

If you represent a public agency, please provide the name, email address, and telephone number for the contact person in your agency for this EIR/EIS.

1.2 Public Scoping Meeting

Each session of the scoping meeting noticed above will begin with a brief presentation on the proposed Project. The CSLC and MBNMS staffs will then receive comments on the potentially significant environmental issues, Project alternatives, and mitigation measures that should be included in the EIR/EIS, until all persons present who wish to provide oral comments have done so, at which time staff will close the session. If persons present are still providing comments 30 minutes before the scheduled start of the second session, staff may suspend the first session but will continue to take comments after the second session begins. The CSLC and MBNMS staffs may impose a 3-minute time limit on oral comments.

If you require a sign language interpreter, or other reasonable accommodation to conduct business at the scoping meeting for a disability as defined by the Federal Americans with Disabilities Act or California Fair Employment and Housing Act, please contact the CSLC staff person listed in this NOP/NOI at least 48 hours in advance of the meeting to arrange for such accommodation.

2. PROJECT LOCATION AND BACKGROUND

The Applicant has applied to the CSLC and MBNMS to implement the Project at Moss Landing, Monterey County, California (Attachments 1-4). As proposed, DWD would construct and operate a seawater reverse osmosis desalination facility (SWRO Desalination Facility) capable of producing 25,000 acre-feet per year (AFY) of potable water and a co-located seawater-cooled computer data center campus on a 110-acre site located approximately 1.5 miles east of Moss Landing. Seawater intake and brine discharge pipelines would extend west from Moss Landing Harbor to the upper reaches of the submarine Monterey Canyon and the north shelf, respectively, within the MBNMS. A summary of Project components is included in Attachment 6.

The Monterey Bay region obtains most of its municipal water supplies from a combination of groundwater and diversions from local streams and rivers. The region has relatively little storage capacity for surface waters (reservoirs), and over-drafting of groundwater has resulted in seawater intrusion into coastal aquifers. Pending regulatory actions to reduce or eliminate water diversions from local rivers may also further restrict

water availability from those sources. The combined effect of these factors makes the region's water supply highly vulnerable in drought conditions.

According to the Applicant, the Monterey Bay region is also under-served by the lack of broadband fiber infrastructure and data storage capability. The proposed Project would address this issue through the development of a seawater-cooled computer data center co-located with the desalination facility.

3. PROJECT OBJECTIVE AND DESCRIPTION

DWD's Project objective is to provide needed potable water for the Monterey Bay region, provide a drought reserve, and enable reduced groundwater pumping and surface water diversion to promote habitat restoration. A seawater-cooled data center would be co-located with the desalination facility to lower the cost of desalinating ocean water and to improve regional data connectivity. The Project would include the construction of the following components.

- SWRO Desalination Facility with Co-located Seawater-Cooled Data Center;
- Fiber Optic Cable Connections;
- Onshore Pipelines and Channel Crossing;
- Wet Well;
- Offshore Pipelines and Intake/Discharge Structures;
- Product Water Pipelines to the Monterey Peninsula, Castroville and Salinas, and Santa Cruz County; and
- Any necessary construction staging/storage areas (to be determined during EIR/EIS preparation).

Attachments 1 and 2 show the locations of these Project components. Attachment 6 provides a summary of the components.

3.1 SWRO Desalination Facility with Co-Located Seawater-Cooled Computer Data Center

SWRO Desalination Facility

The main entrance for the SWRO Desalination Facility site would be through an existing gate located at the western terminus of Via Tanques Road near the intersection of Via Tanques and Dolan Roads. The co-located seawater-cooled computer data center campus, an electrical substation, and water storage facilities would also be located on the site.

The SWRO Desalination Facility would produce 25,000 AFY of potable water from 55,000 AFY of seawater. Ten SWRO pumps (plus one stand-by) would pump the seawater through the SWRO membranes. Each pump has a rated capacity of approximately 1,600 gallons per minute (gpm), and would have discharge pressures ranging from 850 to 1,000 pounds per square inch (psi).

Most SWRO desalination plants employ energy recovery devices to recover pressure from the membrane reject stream and return it to the process. The proposed Project's process and energy recovery systems consist of a modular array and skid approach. One complete standby SWRO skid and energy recovery system would be available to ensure reliable water plant production. The entire membrane and energy recovery systems would be automated, and operating conditions such as pressure and water quality would be continuously monitored using sensors and computer control systems.

Seawater-Cooled Computer Data Center Campus

The seawater-cooled computer data center campus would include four two-story data center buildings. The total land footprint for the buildings is expected to be approximately 775,000 square feet. Each building would contain servers and related equipment requiring some portion of the targeted 150 megawatt (MW) total power load. The distribution of data center equipment (e.g., computer servers) would be roughly proportional to individual building size; approximately 27 MW of server load for the smaller buildings and 52 MW for the larger buildings. In addition to computer server space, each building would include office space, including restrooms, kitchen space and storage. A loading and trash enclosure area would be located to the rear of each building.

Each data center building would include a closed loop cooling system designed to provide air-conditioning to both office and computer server areas of the buildings. In lieu of the chiller units and evaporative cooling systems typically employed for building air conditioning, the data centers would reject heat to the cold seawater being pumped to the inlet side of the SWRO desalination facility. Each data center would draw a slipstream of water from the cold seawater line and run that water through a non-contact, tube-and-shell heat exchanger where it would collect heat from the data center cooling system. The heat exchanger tube sheet would be made of either titanium or an admiralty metal to avoid problems with corrosion. Assuming 150 MW of data center capacity, the incremental change in temperature to the intake seawater would be approximately 5 degrees centigrade. This heated seawater would then be pumped through the SWRO membranes, reducing the energy required to facilitate desalination.

Electrical Substation

The Project would have substantial electrical demands. The data center campus would require 150 MW and the SWRO Desalination Facility and other site infrastructure would require an additional 20 MW of electrical power. The data center campus derives commercial value in part from its ability to provide customers with critical space to support their servers, including access to a steady stream of high-quality electrical power supply. Interruptions of power could lead to server damage or corruption of data stored on the servers. Several high voltage power lines run through a corridor located on the SWRO Desalination Facility site. The proposed interconnection and substation facilities would provide redundant electrical power supply required to ensure reliability for data center operations. The electrical interconnection would require new transmission tower structures to redirect the Moss Landing-Coburn circuit beneath the existing transmission lines and into the new substation. Within the new substation, the

230 kilovolt (kV) circuit would pass through a series of electrical breakers before leaving the new substation on additional, new transmission structures and continuing its original routing on the existing transmission structures. The Project site would house all of the new transmission structures.

Product Water Storage

Product water would be temporarily stored on site prior to forwarding it to a distribution pipeline. The storage facilities would be comprised of two aboveground tanks (approximately 160 feet in diameter and 37 feet tall) constructed of pre-stressed concrete, each with a capacity of 5.5 million gallons, which would provide sufficient retention time to satisfy disinfection requirements prior to distribution. A high-service water pump station would provide high quality drinking water for distribution. Eight operating and one stand-by pumps would each have a rated capacity of approximately 1,900 gpm and capable of discharge pressures reaching 100 psi to the distribution system. The pump bodies would be constructed of stainless steel; pipe and valves would be a combination of stainless steel, thermoplastic or lined steel based on pressure and service location.

3.2 New Fiber Optic Cable Connections for Data Center

The Project would interconnect with existing fiber optic cables running along the nearby Union Pacific Railway line east of the Project site. Fiber optic cable would be buried in new conduits along the routes shown in Attachment 2.

3.3 Onshore Pipelines and Elkhorn Slough Channel Crossing

DWD would install dual intake and discharge pipelines between the SWRO Desalination Facility and a shaft/pit (Shaft/Pit #1, see Attachment 2) using an open trench method to the greatest extent possible. As proposed, the seawater intake pipelines would be 42 inches in diameter; the brine discharge pipelines would be 36 inches in diameter. The pipeline materials used onshore would vary based on subsurface impediments, which are presently unknown, but would likely be composed of flexible polyvinyl chloride (FPVC). Subsurface conflicts that cannot be averted by open trench would be diverted above-grade on pipe saddles consisting of high-density polyethylene (HDPE), FPVC, or glass reinforced plastic (GRP).

Two parallel pilot tube tunnels would be constructed below California State Route 1 (SR-1) using horizontal directional drilling (HDD) technology. Single steel casings would be placed within each tunnel to convey individual discharge and intake lines below SR-1 (i.e., four casings total). The casing diameters are estimated to be 54 inches for the 42-inch intake lines and 48 inches for the 36-inch discharge lines, with a 3-foot clearance horizontally between the casing walls. Alternatively, based on final engineering design, DWD may install two larger-diameter casings, one for both 42-inch intake lines and one for both 36-inch discharge lines. The pipelines would run from Shaft/Pit #1 east of SR-1 through the tube tunnels below SR-1. The intake pipelines would continue to a proposed onshore gravity-fed wet well and pump. The discharge

pipelines would run adjacent to the wet well. Both the intake and discharge lines would run under Elkhorn Slough, as described below.

An approximately 130-inch-diameter steel casing would be installed under the Elkhorn Slough seabed using a micro-tunneling system between the onshore gravity-fed wet well/pump area and a second shaft/pit (Shaft/Pit #2) located in the parking area at Moss Landing State Beach. Both the dual 42-inch FPVC intake pipelines and the dual 36-inch FPVC discharge pipelines would run through this casing.

3.4 Wet Well

DWD would construct a wet well, comprised of a concrete basin and pump station, on a privately owned parcel located west of the Moss Landing Power Plant, between the Pacific Gas and Electric Company (PG&E) substation and Elkhorn Slough. The wet well would provide a reservoir of seawater to supply the transfer pumps with seawater via gravity feed (to insure that the pump suctions are always flooded to avoid damaging the pumps) in order to deliver the seawater to the SWRO Desalination Facility site. The concrete basin would receive seawater delivered via the dual 42-inch subsurface intake lines. The pump station would contain six intake pumps (five operating and one stand-by) each with a rated capacity of approximately 6,800 gpm and with a discharge pressure of 55 pounds per square inch gauge (psig), a pig launching system, cathodic protection, and a water quality sampling station. The wet well and pumps would be located below grade. The only equipment planned to be above-grade would be housed in a small building and include transformers and an emergency backup power supply system.

Although the need for biofouling control cannot be determined until after the system is operational, a chemical biofouling control system would be included in the design of the wet well, and further described in the Draft EIR/EIS. The purpose of the biofouling control would be to prevent biological growth on the walls of the conveyance pipelines, which can affect water flow and increase energy demand.

3.5 Offshore Pipelines and Intake/Discharge Structures

DWD would use HDD technology to install two 42-inch-diameter HDPE intake pipelines and two 36-inch-diameter steel discharge pipelines beneath the ocean floor. Due to space limitations on Moss Landing State Beach and the depth of the proposed Elkhorn Slough crossing microtunnel, HDD drilling operations would: (1) start at Shaft/Pit #3, which would be located within a restaurant parking lot across a small channel east of Moss Landing State Beach; (2) continue through Shaft/Pit #2 where the onshore and offshore pipelines would be connected; and (3) terminate offshore. Once the HDD drilling heading is offshore of Moss Landing State Beach, the HDD drives should be about 50 feet below the seafloor or greater until about 500 feet from the discharge and intake points. At that point, the drilling head would turn up at a 4° angle until it breaches the canyon wall for the intake pipeline or the seafloor for the discharge pipeline. The temporary casings used for the HDD drilling between Shaft/Pit #3 and Shaft/Pit #2 would be removed once the pipelines are installed at Shaft/Pit #2.

Intake Pipelines/Structures

Seawater would be extracted from the ocean through a passive, wedgewire-screened, low-velocity intake mounted at the terminus of the two 42-inch intake pipelines. As proposed, the intake would be located on the uppermost northern slope of the Monterey Submarine Canyon approximately 2,565 feet offshore of the ordinary high water mark (OHWM), northwest of the Moss Landing Harbor entrance, at a depth of approximately 100 feet. DWD selected dual intake pipes rather than a single large diameter pipe to provide for flow redundancy during annual pipe cleaning and maintenance operations. Intake pipe redundancy would allow a minimum of 25 million gallons per day of uninterrupted seawater flow per pipe to support data center cooling and desalination operations during pigging operations or other maintenance activities.

At the breakout face where the dual pipelines emerge from the seafloor, the screening manifold for each pipe would be connected with flexible couplings to allow for some movement. However, the screens would also be secured to reinforced concrete pads with concrete pipe supports. In addition, the pads would be secured to the ocean floor with embedment anchors, hollow-bar, or rock-bolt anchors attached to gravity anchors (refer to Attachment 5). Screen sections could be removed entirely for maintenance purposes with little downtime; and the end of each pipe could also be removed to facilitate cleaning or pigging. In addition to the wedgewire screens, the screened deep water intake water velocity would be at or below the regulatory standards for open ocean intakes (0.5 feet per second).

Assertions by the Applicant that will be verified during the EIR/EIS process:

- The combined approach of intake screening and minimized intake velocity would meet the regulatory standard of Best Technology Available for reducing the environmental effects of the seawater intake.
- Withdrawing source water from the Monterey Submarine Canyon below the euphotic zone (the depth of a water column that is exposed to sufficient sunlight for photosynthesis to occur) would minimize environmental impacts that are a concern for open ocean intakes located in shallow water.
- Assessments conducted by the Applicant concluded that, due to a deep-water mass that predominates the upper slope of the canyon, fewer planktonic marine organisms are present in the water column at the depth of the proposed intake.
- The near-shore access to deep water makes siting an intake in deep water economically and technically feasible where it otherwise would not be for other coastal locations.

Discharge Pipelines/Structures

The Applicant’s preferred location for mixing brine with seawater is at the deep discharge site located at a depth of 35 meters. Two 36-inch-diameter steel discharge pipelines would be installed from Shaft/Pit #2 to the discharge location approximately 5,675 feet offshore from the OHWM near the terminus of the existing oil pipeline on the north flank of the Monterey Submarine Canyon. A unifying Y-connection would be

installed at the terminus of the two discharge pipes, combining them into a single HDPE section to allow for installation of diffusers. An example of the diffuser design is provided in Attachment 5.

The section would extend out to a diffuser system that would be oriented orthogonal to the shoreline. The system would consist of five discharge risers emerging from a manifold and fitted with duckbill diffuser nozzles to assure rapid and thorough mixing with ambient seawater. The diffusers would be attached to a distribution manifold and spaced approximately 3 feet apart (see Attachment 5).

3.6 Product Water Pipelines

In addition to the Project components analyzed fully in the EIR/EIS, the EIR/EIS will discuss at a programmatic level several Product Water Pipelines that could potentially deliver water south to the Monterey Peninsula communities, south to Castroville and southeast to Salinas, and north to Santa Cruz County. These Product Water Pipelines would be separately proposed, permitted, and constructed by the individual water suppliers. The three Product Water Pipelines discussed would include the following:

- Monterey Peninsula Product Water Pipeline. This pipeline would begin at the southeast corner of the SWRO desalination facility and extend 9 miles south along the Union Pacific Railroad through Castroville. The pipeline would then follow the Transportation Agency for Monterey County right-of-way to Beach Road in Marina. From there, the pipeline alignment would continue in a southerly direction for 7 miles connecting with the Seaside and Monterey Pipelines just north of the intersection of Auto Center Parkway and Del Monte Boulevard.
- Castroville and Salinas Product Water Pipeline. The pipeline would exit the SWRO Facility east to the Union Pacific Railroad corridor southward and then continue approximately 12 miles to the Cal Water Salinas distribution system.
- Santa Cruz County Product Water Pipeline. The pipeline would exit the SWRO Facility and cross Elkhorn Slough via HDD. On the north side of Elkhorn Slough, the pipeline would parallel an existing reclaim water pipeline to the Pajaro Valley Water Management Agency recycled water plant within an easement on Beach Road. The pipeline would then continue along San Andreas Road along an abandoned rail line. The pipeline would terminate at the Soquel Creek Water Management Agency's distribution system in Capitola.

4. PERMITS AND PERMITTING AGENCIES

In addition to action by the CSLC, the Project may also require permits and approvals from other reviewing authorities and regulatory agencies that may have oversight over aspects of the proposed Project activities, including but not limited to the following.

- Moss Landing Harbor District
- Monterey County
- Monterey County Air Pollution Control District (MCAPCD)
- California Coastal Commission (CCC)

- California Department of Fish and Wildlife (CDFW)
- Central Coast Regional Water Quality Control Board (RWQCB)
- State Office of Historic Preservation (SHPO)
- State Water Resources Control Board (SWRCB)
- Monterey Bay National Marine Sanctuary, National Oceanic and Atmospheric Administration (NOAA)
- National Marine Fisheries Service (NOAA Fisheries or NMFS)
- U.S. Army Corps of Engineers (USACE)
- U.S. Coast Guard (USCG)
- U.S. Fish and Wildlife Service (USFWS)
- Applicable Native American Tribes

5. SCOPE OF THE EIR/EIS

The CSLC and MBNMS staffs have conducted a preliminary review of the proposed Project and determined that an EIR/EIS is necessary based on the potential for significant impacts resulting from the Project. A preliminary list of environmental issues and alternatives to be analyzed in the EIR/EIS is provided below. Additional issues and/or alternatives may be identified during the scoping process and/or during preparation of the EIR/EIS. The CSLC and MBNMS staffs invite comments and suggestions on the scope and content of the environmental analysis, including the significant environmental issues, reasonable range of alternatives, and mitigation measures that should be included in the EIR/EIS.

Use of the term “significant” differs under CEQA and NEPA. While CEQA requires that a determination of significant impacts be stated in an EIR, NEPA does not require such a determination in an EIS. Under NEPA, significance is used to determine whether an EIS or some other level of documentation is required, and once a decision to prepare an EIS is made, the EIS reports all impacts, regardless of significance, and proposes mitigation wherever it is feasible to do so.

Because CEQA requires significance determinations and NEPA does not, the specific significance determinations in the EIR/EIS will be made under CEQA. The following designations will be used in the EIR/EIS when examining the potential for impacts for each environmental issue area.

Significant Impact	Any impact having a substantial, or potentially substantial, adverse change in the environment, and for which feasible mitigation must be identified and implemented. If any significant impacts are identified that cannot be mitigated to a less than significant level, the impact would be *significant and unavoidable*; if any significant impacts are identified for which feasible, enforceable mitigation measures are developed and imposed to reduce the impacts below applicable significance thresholds, the impact would be *less than significant with mitigation*.

Less Than Significant Impact	Any impact that would not be considered significant under CEQA relative to the applicable significance threshold, and therefore would not require mitigation.
No Impact	The Project would not result in any impact to the associated environment.
Beneficial Impact	The Project would provide an improvement to the associated environment in comparison to the baseline information.

The estimations of impact levels used for this NOP/NOI are based solely on preliminary documents. Impact levels may change and additional impacts may be identified during preparation of the EIR as more information is obtained.

5.1 Currently Identified Potential Environmental Impacts

The EIR/EIS for the MBRWP will discuss and assess the following: the purpose and need for the Project, which would require CSLC approval of a State lease, California Coastal Commission approval for a Coastal Development Permit, and federal approval to construct and operate the Project; the affected environment/baseline; Project alternatives, including the no action/no project alternative and other feasible alternatives identified to reduce significant impacts of the proposed Project; the impacts of the Project and its alternatives on the environment; and feasible mitigation measures to avoid or substantially reduce the environmental effect of the Project and its alternatives.

Based on initial internal scoping, the Project is not anticipated to affect the following environmental issue areas identified in State CEQA Guidelines Appendix G (Environmental Checklist Form), which could therefore be eliminated from consideration in the EIR/EIS.

- **Population or Housing –** The Project is not anticipated to displace existing housing or population or create the need for new temporary housing for construction workers. (The potential for the project to result in long-term growth inducing effects will be addressed in a separate growth-inducement analysis. See Section 5.2.)

Environmental issues that may require detailed analysis include, but are not necessarily limited to the following.

- ***Aesthetics*** *– Potential impacts of aboveground pipeline routes, the water storage tanks, or other Project components on scenic vistas and eligible scenic highways*.

- ***Agriculture*** *– Potential impacts on designated farmland and Williamson Act contracts due to pipeline routes and other Project components.*

- ***Air Quality*** *– Potential for onshore and offshore construction and operation emission impacts on regional air quality and potential health risks from increased air pollutant emissions.*

- ***Biological Resources (Marine and Terrestrial)*** – *Potential direct and indirect impacts on marine and terrestrial biological resources*. The EIR/EIS will: (a) evaluate potential impacts on Essential Fish Habitat, and other critical habitats and natural communities such as wetlands and riparian vegetation, threatened and endangered species and other special status species including marine mammals, fish, turtles, invertebrates, seabirds and shorebirds, invasive species, marine protected areas (see Attachment 3), refuges, preserves, MBNMS and local estuaries, and wetlands; (b) analyze potential noise, vibration and lighting impacts on marine mammals and birds; (c) analyze the potential for entrainment and/or impingement of marine species due to any pumping and processing of seawater; and (d) analyze the effects of vessel traffic creating a potential for an encounter with marine mammals. NEPA mandates that Federal agencies assess proposed Federal actions' environmental impacts, including impacts on marine and terrestrial biological resources. Federal agencies meet their NEPA review responsibilities by completing the NEPA processes set forth in their NEPA implementing procedures and CEQ NEPA Regulations (40 CFR § 1500 et seq.).

- ***Cultural Resources*** – *Potential impacts on cultural resources, both offshore (e.g., shipwrecks) and onshore, and their potential sensitivity and proximity to the Project's nearshore and onshore activities*. Documented sensitive resources would be avoided or mitigated in accordance with existing regulations in consultation with the State Historic Preservation Office (SHPO), local Tribes, and the CSLC and MBNMS. NEPA mandates that Federal agencies assess proposed Federal actions' environmental impacts, including impacts on historic and cultural resources. Federal agencies meet their NEPA review responsibilities by completing the NEPA processes set forth in their NEPA implementing procedures and CEQ NEPA Regulations (40 CFR § 1500 et seq.).

- ***Geology and Soils*** – *Potential impacts associated with geologic and soil hazards (e.g., erosion, differential settlement), seismic hazards and seismically induced hazards, including earthquakes, ground shaking, and tsunamis.*

- ***Greenhouse Gas (GHG) Emissions and Climate Change*** – *Potential impacts due to GHG emissions from Project construction and operation activities based, if applicable, on guidelines provided by the Monterey Bay Unified Air Pollution Control District*. The analysis will include an assessment of projected emissions resulting from co-locating the proposed data center campus with the desalination facility.

- ***Hazardous Materials/Risk of Upset*** – *Potential upset conditions during Project construction and operation that could result in release of hazardous materials, fire, explosion or other conditions that could be hazardous to both the public and specific resources (e.g., Biological Resources; Hydrology, Oceanography and Water Quality)*. Potential safety hazards of the Project and alternatives will be based on a change from existing conditions. The EIR/EIS will also address the handling, storage, and disposal of hazardous materials (e.g., petroleum products,

solvents, drilling muds and cuttings, and otherwise regulated chemical materials) that could result from Project activities.

- ***Hydrology, Oceanography & Water Quality*** – *Potential impacts on surface water, groundwater, marine hydrology, and water quality resulting from the Project*, *and specifically the discharge of brine.* This section will rely, in part, on information from various agencies including Monterey County, RWQCB, and NMFS, as well as any new scientific information.

- ***Land Use, Planning*** – *Potential land use and planning impacts associated with the Project in regards to existing land use and planning conditions and consistency with land use policies/plans in the Project vicinity, such as those related to offshore sanctuaries, marine protected areas, designated agricultural areas and sea level rise*.

- ***Mineral Resources*** – *Project alternatives may include the use of sand to filter seawater.* The proposed Project does not preclude or involve significant extraction and removal of that may be deemed to be a locally important mineral resource of value to the region. In addition, the Applicant plans to use prefabricated filters, not sand, to remove suspended solids from the seawater that could otherwise foul the SWRO membranes. The filters would be horizontal pressure-type and constructed of rubber-lined carbon steel.

- ***Noise*** – *Potential noise impacts, both from onshore and offshore short-term (construction) and long-term noise sources, on human recreators, such as divers and beachgoers, workers, and residents*. The Biological Resources section of the EIR/EIS will analyze impacts of underwater noise on marine life (due to the installation of offshore portions of the intake and discharge pipelines).

- ***Public Services*** – *Potential impacts due to the development of a SWRO Facility and data center campus, as it is anticipated that the Project would be served by existing fire and police services within existing service areas*.

- ***Recreation*** – *Potential impacts from temporary construction activities or hazardous materials releases that could preclude the use of nearby marine waters, beach areas and associated activities*. Onshore recreation within the Project area would likely impact bike and pedestrian traffic, parking for anglers, and kayaking. Offshore recreation within the Project area consists of beachgoing, surfing, boating, kayaking and fishing, among other water sports, and the marine waters provide opportunities for fishing and whale watching.

- ***Transportation/Traffic*** – *Potential impacts due to activities that would generate construction vehicle trips, resulting in a temporary increase in traffic volumes along local and regional roadways, and the installation of pipelines along or adjacent to road right-of-ways, resulting in temporary road closures and traffic delay*s. In addition, offshore construction may conflict with offshore commercial and recreational vessel traffic in the Project area.

- ***Utilities and Service Systems*** – *Potential impacts associated with electrical power used for the SWRO Facility and seawater-cooled data centers*. A new project substation would be built and interconnected to the 230 kV Moss Landing Coburn Line that crosses Project property. As proposed, brine from the desalination process would be conveyed to an offshore discharge location.

- ***Other Issues: Socioeconomics and Environmental Justice*** – *Whether the Project would have the potential to disproportionately affect area(s) of high-minority population(s) and low-income communities, and the Project's consistency with the CSLC's and Federal Environmental Justice Policies*. Socioeconomic conditions relevant to this analysis may include, but not be limited to, those related to commercial and recreational fishing due to the nature of the ongoing operation of the desalination Project (ocean water intake and brine discharge).

5.2 Special Impact Areas

- ***Cumulative Impacts***. State CEQA Guidelines section 15130 requires an EIR to discuss the cumulative impacts of a project when the project's incremental effect is "cumulatively considerable." NEPA guidance also states that cumulatively significant impacts be discussed (40 CFR § 1508.25). A cumulative impact is created through a combination of the project being analyzed in an EIR and other projects in the area causing related impacts. The EIR/EIS will: define the geographic scope of the area affected by cumulative effects ("Cumulative Impacts Study Area"), which for the proposed Project is presently defined as the Monterey Bay region; discuss the cumulative impacts of the proposed Project in conjunction with other approved and reasonably foreseeable projects in the study area; and identify, if appropriate, feasible measures to mitigate or avoid the Project's contribution to cumulative effects.

- ***Growth-Inducing Impacts***. CEQA and NEPA require a discussion of the ways in which a proposed project could foster economic or population growth, including the construction of additional housing, in the project's vicinity. Under the State CEQA Guidelines (§ 15126.2, subd. (d)), a project is growth-inducing if it fosters or removes obstacles to economic or population growth, provides new employment, extends access or services, taxes existing services, or causes development elsewhere. CEQ NEPA Regulations (40 CFR § 1508.8(b)) state that "indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems."

- ***Irreversible/Irretrievable Commitment of Resources***. The EIR/EIS will include a discussion of the development and commitment of resources.

5.3 EIR/EIS Alternatives Analysis

In addition to analyzing the potential impacts associated with the proposed Project, in accordance with the State CEQA Guidelines, an EIR must:

> *…describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives* (§ 15126.6).

Per NEPA Guidance, an EIS must:

> *…(a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated. (b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits* (CEQ NEPA Regulations; 40 CFR § 1502.14).

The State CEQA Guidelines also require that the EIR/EIS evaluate a "no project" alternative and, under specific circumstances, designate an environmentally superior alternative from among the remaining alternatives. CEQ NEPA Regulations specify that an alternative of no action be included in the analysis. Alternatives will be identified as a result of the environmental analysis and on information received during scoping. The EIR/EIS will:

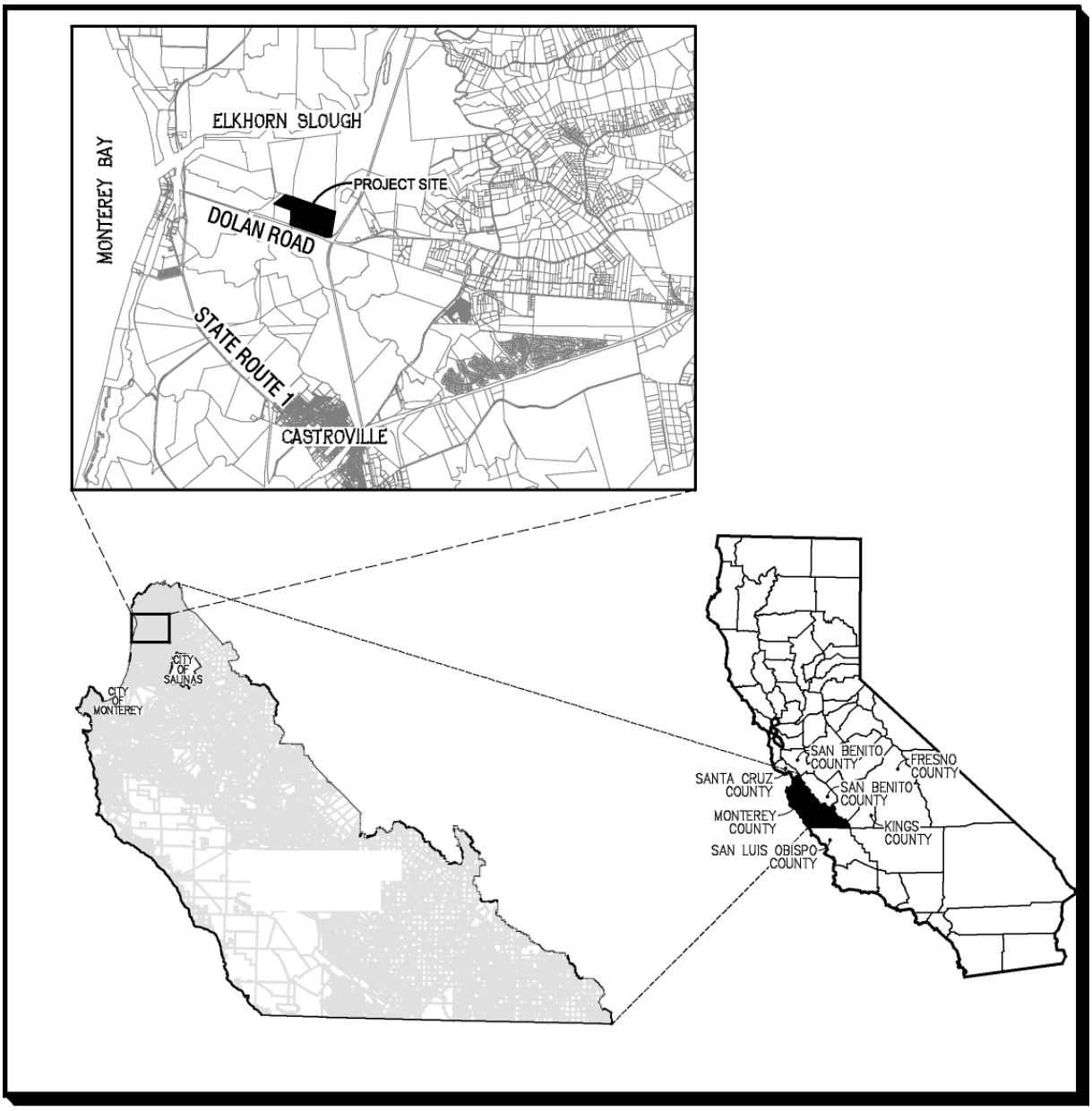
- provide the basis for selecting alternatives that are feasible and that would reduce significant impacts associated with the proposed Project;
- provide a detailed explanation of why any alternatives were rejected from further analysis; and
- evaluate a reasonable range of alternatives including the "no project" alternative.

Examples of possible alternatives, or combinations of alternatives, to be evaluated include the following:

- Alternative subsurface intake
- Alternative locations for intake and discharge inlet and outlets
- Alternative onshore intake/discharge pipeline routes
- Alternative production capacity including fewer or smaller pipelines
- Alternative wet well locations
- No Project Alternative

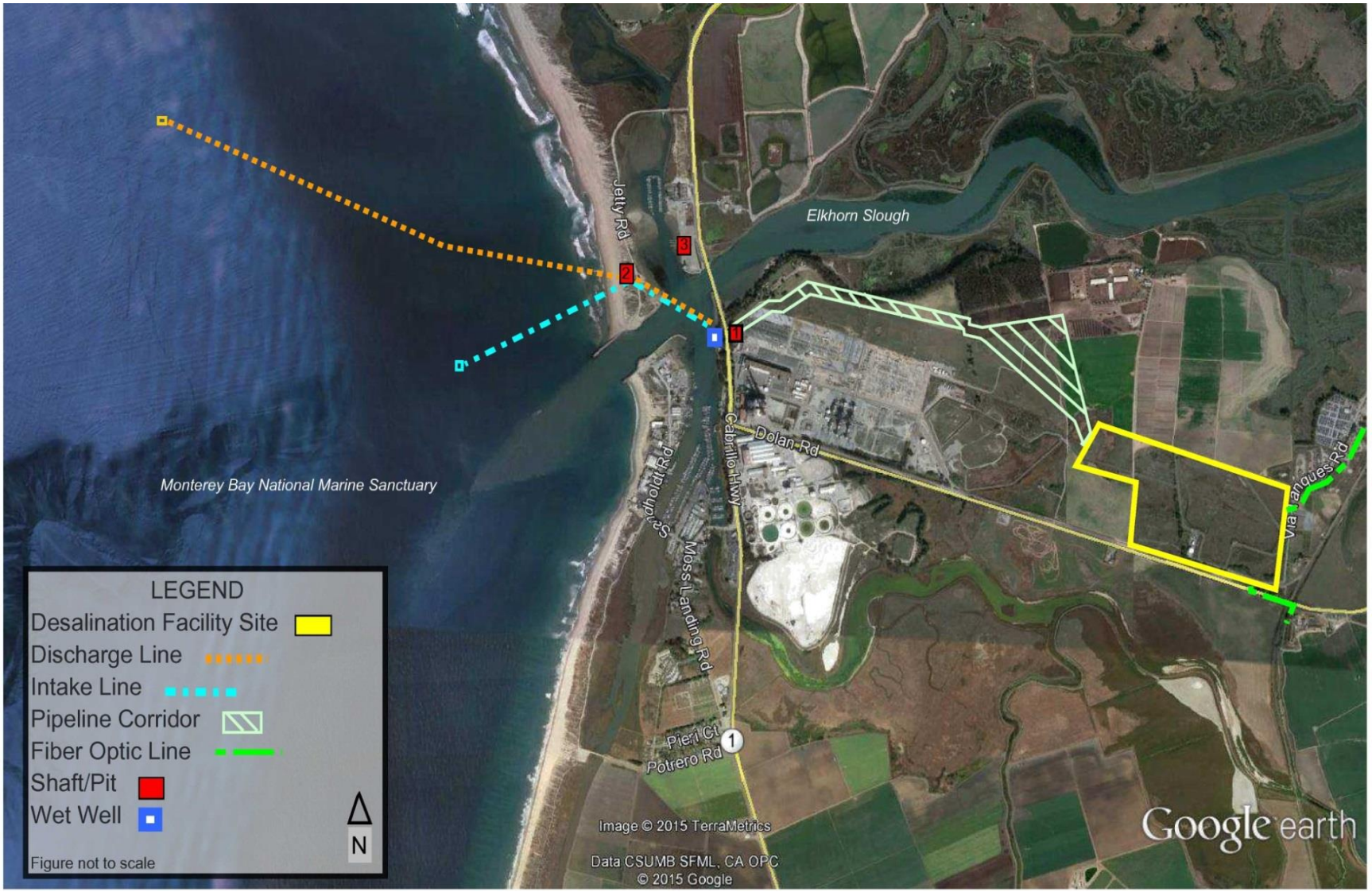
The EIR/EIS may also include as part of the analysis of Project alternatives, project-level analyses of other currently proposed desalination projects requiring approval by CSLC and MBNMS. The analysis would incorporate by reference information contained in other EIRs prepared by other State and/or local agencies, or application documents prepared by applicable desalination project proponents. Alternatively, the EIR/EIS may analyze these other desalination projects as part of the cumulative impacts discussion.

ATTACHMENT 1. PROJECT LOCATION

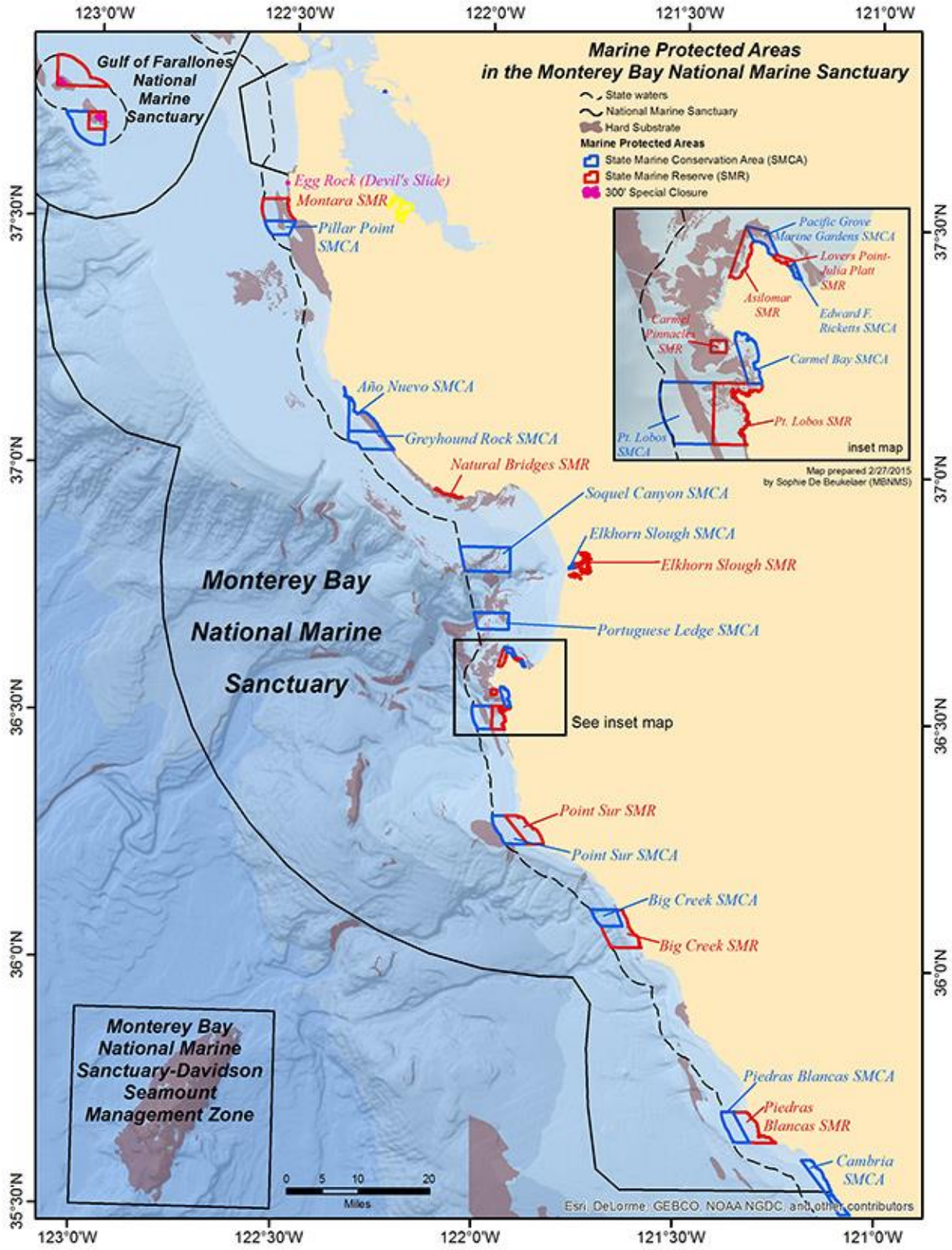


not to scale

ATTACHMENT 2. PROJECT COMPONENTS



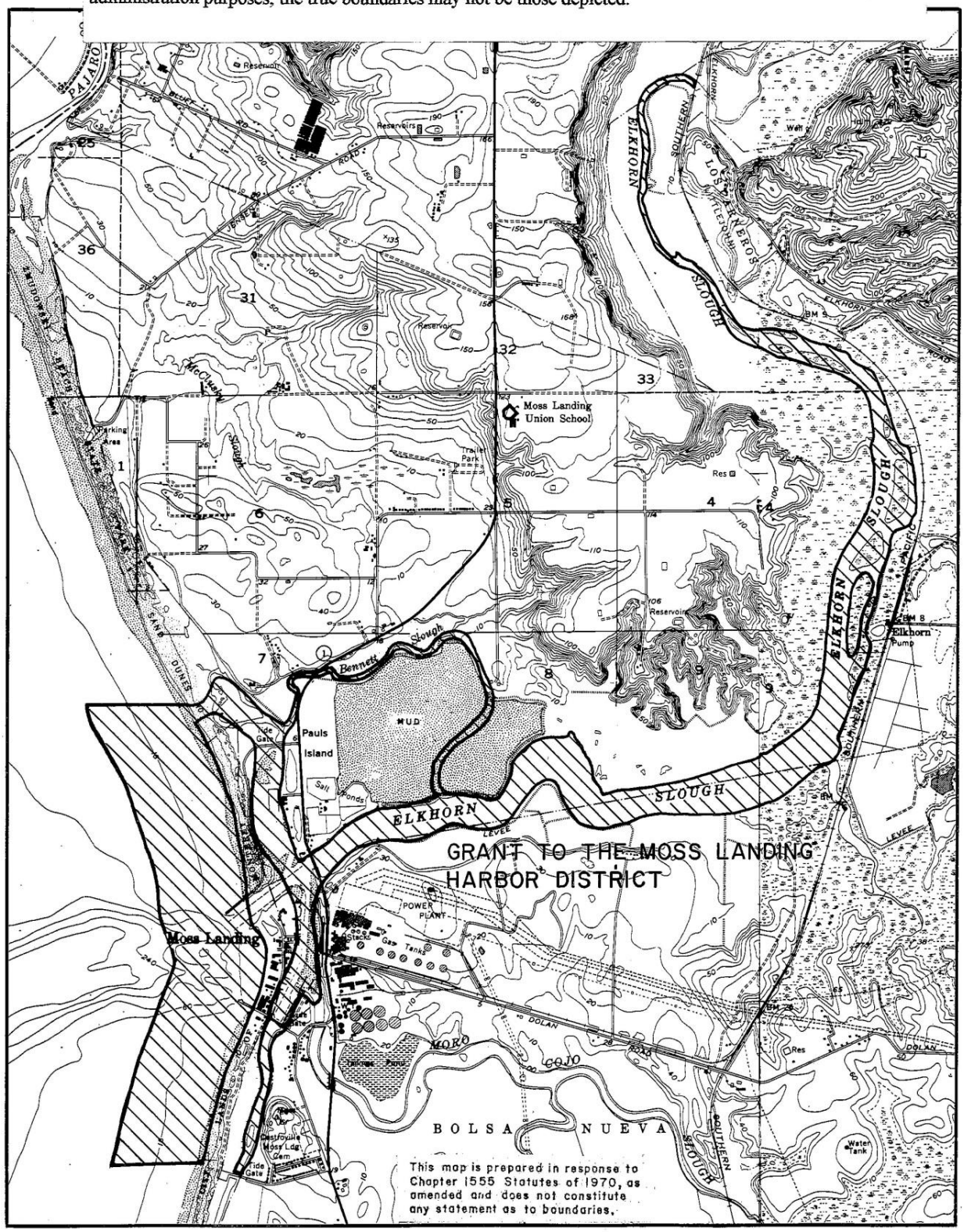
ATTACHMENT 3. MARINE PROTECTED AREAS



Graphic taken from http://montereybay.noaa.gov/materials/maps.html#mlpa

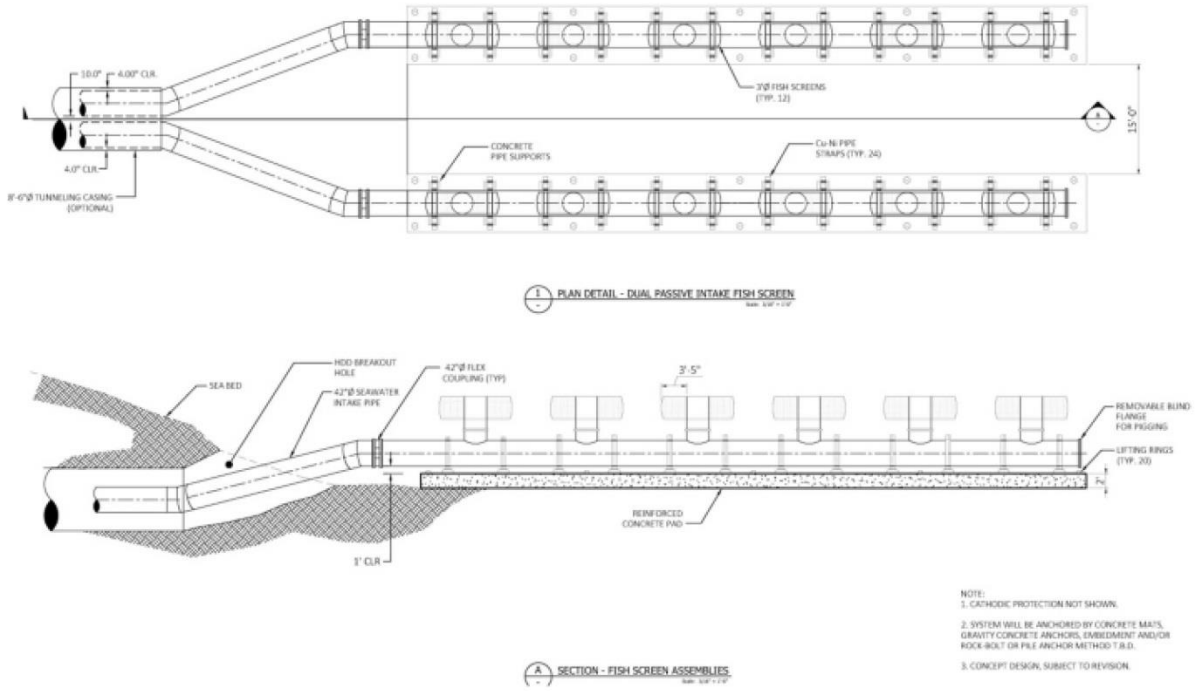
ATTACHMENT 4. CSLC GRANT MAP

This map was prepared by the staff of the California State Lands Commission. The map was based upon information available to the staff at the time of the survey. It does not reflect legislation, court decisions, or other information unavailable to staff at the time of the survey. Therefore, while useful for general grant administration purposes, the true boundaries may not be those depicted.



ATTACHMENT 5. EXAMPLE INTAKE AND DISCHARGE STRUCTURES

Proposed Intake Detail



Example of Proposed Linear Diffuser

ATTACHMENT 6. SUMMARY OF PROJECT COMPONENTS

Primary Project Components	
Seawater Reverse Osmosis Desalination Facility (SWRO Facility) and Seawater-Cooled Data Center Campus	• An SWRO Facility would be located on a 110-acre site and capable of producing 25,000 acre-feet per year (AFY) of potable water from 55,000 AFY of seawater. • The site would also house a seawater-cooled, 150-megawatt data center campus and an electrical substation.
Fiber Optic Cable Connections	• The project would interconnect with existing fiber optic cable running along the nearby Union Pacific Railway line east of the Project site.
Onshore Pipelines and Elkhorn Slough Channel Crossing	• Two 42-inch-diameter intake pipelines and two 36-inch-diameter discharge pipelines would be installed underground using an open trench construction method where feasible, from the SWRO Facility to Shaft/Pit #1. • Shaft/Pit # 1 would be sited east of SR-1. • Two parallel pilot tube tunnels would be constructed below State Route 1 (SR-1) using horizontal directional drilling (HDD) technology. The tunnels would house four steel casings (two 54-inch casings for each of the two 42-inch intake lines and two 48-inch casings for each of the two 36-inch discharge lines). Alternatively, based on final engineering design, DWD may install two larger-diameter casings, one for both 42-inch intake lines and one for both 36-inch discharge lines. • All four pipelines would be installed between Shaft/Pit #1, under SR-1, to a gravity-fed wet well and pump west of SR-1. • One 130-inch-diameter steel casing would be installed under the Elkhorn Slough channel using a micro-tunneling system. • Both the dual 42-inch intake pipelines and the dual 36-inch discharge pipelines would run from the wet well/pump, below the Elkhorn Slough channel, to Shaft/Pit #2. • Shaft/Pit #2 would be sited in the parking area at Moss Landing State Beach.
Wet Well	• An onshore gravity-fed wet well and pump would be sited west of SR-1 and existing Dynegy and PG&E facilities. The wet well would allow seawater intake flow to fill a reservoir to facilitate pumping of the seawater to the SWRO Facility.
Offshore Pipelines and Intake/Discharge Structures	<u>HDD</u> • Two 42-inch-diameter intake pipelines and two 36-inch-diameter discharge pipelines would be installed using HDD technology. HDD operations would be initiated at Shaft/Pit #3. However, the offshore and onshore pipelines would connect at Shaft/Pit #2. • Shaft/Pit #3 would be sited within a restaurant parking lot across a small channel east of Moss Landing State Beach. The site was selected due to space limitations on Moss Landing State Beach and the depth of the proposed Elkhorn Slough tunnel crossing. • DWD would remove temporary casings placed between Shaft/Pit #3 and Shaft/Pit #2 once the pipelines are in place.

Primary Project Components	
Offshore Pipelines and Intake/Discharge Structures (continued)	<u>Intake</u> • Two 42-inch HDPE intake pipelines would be installed between Shaft/Pit #2 and a deepwater ocean intake. • The intake would be located on the uppermost northern slope of the Monterey Submarine Canyon and mounted at the terminus of the pipeline approximately 2,565 feet offshore of the Ordinary High Water Mark (OHWM). This intake would be screened. <u>Discharge</u> • Two 36-inch steel pipelines installed between Shaft/Pit #2 and a deepwater discharge structure. • The discharge location would be approximately 5,675 feet offshore of the OHWM. The structure would include a series of duckbill diffusers designed to assure rapid and thorough mixing with ambient seawater. The system includes a linear, five-jet riser/diffuser located at depth within the oceanographic area near the terminus of the existing oil pipeline on the north flank of the Monterrey Submarine Canyon. The diffusers would be attached to a distribution manifold and spaced at approximately 3 feet apart.
Potential Product Water Pipelines/Routes[2]	
Monterey Peninsula Product Water Pipeline	• Begins at southeast corner of SWRO Facility • Extends 9 miles south along the Union Pacific Railroad through Castroville • Follows the Transportation Agency for Monterey County right-of-way to Beach Road in Marina • Continues in a southerly direction for 7 miles connecting with the Seaside and Monterey Pipelines just north of the intersection of Auto Center Parkway and Del Monte Boulevard
Castroville and Salinas Product Water Pipeline	• Exits SWRO Facility east to the Union Pacific Railroad corridor southward • Continues approximately 12 miles to the Cal Water Salinas distribution system
Santa Cruz County Product Water Pipeline	• Exits SWRO Facility to the Vierra Wet Well site • Crosses Elkhorn Slough via Horizontal Directional Drilling • On north side of Elkhorn Slough, parallels an existing reclaim water pipeline to the Pajaro Valley Water Management Agency recycled water plant on Beach Road • Continues along San Andreas Road along an abandoned rail line • Terminates at Soquel Creek Water Management Agency's distribution system in Capitola

[2] The EIR/EIS will programmatically discuss several Product Water Pipelines to deliver water south to Monterey Peninsula communities, east to Castroville and Salinas, and north to Santa Cruz County. These Product Water Pipelines would be separately proposed, permitted, and constructed by the individual water suppliers.